Still Alive With Sir Clive!

ZXir QLive Alive!

The Timex/Sinclair NorthAmerican User Groups Newsletter

Volume 8 No 4 [illegible]

Chairman Donald S. Lambert Auburn, IN

MEMORY MAP

ROUTINES

ADDRESS

2 Information and Chairmen — Trea$ury Note$
3 ***Input/Output*** — *by Abed Kahale*
3 Puzzle — Peter Liebert-Adelt
4 **Sinclair List** — Jay Shepard
6 Sinclair Show — FWD Computing
7 **West Sinclair Show** — Tim Swenson
8 Sinclair E-Mail List
8 **GOODBYE Sinclair— FWD Computing**
9 From The Chairman's Disk — Donald Lambert

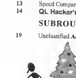
FILES

10 FOP_OVER — Al Feng
10 LarKen/PASCAL — David Solly
11 LarKen/HiSoft — David Solly
13 Speed Comparison - 2068 — David Solly
14 **QL Hacker's Journal** — Tim Swenson

SUBROUTINES

19 Unclassified Ads

IT'S TIME TO RENEW YOUR membership



ZXir QLive Alive! ☺

Established 1991 The Timex/Sinclair NorthAmerican User Groups Newsletter

T/SNUG Information

We wish to support the following platforms ZX-80/81, TS-1000, Spectrum, TS-2068 Z88 and QL. If you have any questions about any of these fine Sinclairs, contact the

Chairman

Chief Motivator
Donald S Lambert (ISTUG)

Vice-Chairmen

Tape & JLO PD Library
D G Smith
415 Stone St
Johnstown, PA 15906
814 535-6998

Z88 Library
Dave Bennett (HATSUG)
1275 Timber View Dr
Mechanicsburg, PA 17055-9146
717 732-4374

QL Hacker's Journal
Timothy Swenson
2455 Medallion Dr
Union City, CA 94587-1914
swensontc@geocities.com

TS-2068
Rod Humphreys (VSUG)
10984 Collins Pl.
Delta, BC V4C 7E6 Canada
604 583-2819

QL PD Library
John Donaldson (CATUG)
835 Foxwood Cir
Geneva, IL 60134-1631
630 232-6147

AERCO & Z80 Emulator
Keith Watson
41634 Amberly Dr
Mt. Clemens, MI 48038

BBS --==GATOR==--
Bob Swoger (CATUG)
613 Parkside Cir
Streamwood, IL 60107-1647
630 837-7957 Work 847 576-8068

Any of the above can also be reached by E-Mail through the **Club BBS 847 632-5558**

ZXir QLive Alive!

Is the newsletter of T/SNUG, the Timex/Sinclair North American User Groups, providing news and software support to the T/S community in a **VOLUME** of four newsletters per year, beginning with the Spring (March) issue.

T/SNUG's main goal is to preserve and encourage the use of Sinclair computers by providing an open forum for the exchange of knowledge, building and maintaining of software libraries. Providing vendors, repair service and members with free ad space

It is the user groups and individual subscribers, rather than the vendors, that provide the pecuniary support for this newsletter. Vendors and developers receive this newsletter free of charge, though contribution from vendors and user groups is gratefully accepted. Please support our vendors and service providers whenever possible.

If you have a problem or you have solved a problem, please share it with the rest of us. No problem will be considered unimportant.

Editor/Treasurer Publisher

You can keep T/SNUG alive by an annual contribution of $12 for one VOLUME made payable to Abed Kahale. Send check to -

ABED KAHALE
3343 S FLAT ROCK CT
SIERRA VISTA AZ 85650-6874
520 378-3424

New

Back copies are available for $1.00 each postpaid.

Trea$ury Note$

As of Dec. 15, 1998, we have a balance of $717.03

Article Contributions

Send in your articles by tape or disk and your inputs to —

DONALD S LAMBERT
1301 KIBLINGER PL
AUBURN IN 46706-3010
Phone 219 925-1372

By hardcopy, e-mail or modem (.3-33.6) to
Abed Kahale
E-mail AKahale@compuserve.com

Welcome

Gerald Anson
Louis Florit
David Solly

GATOR'S
Twisted Pair

To better inform the Sinclair Community, four 24-hour a day BBSs are now provided to serve you. You are encouraged to exchange mail and use the files sections of these boards. Bulletins and ads are available to all.

Q-Box BBS **818 254-9878**
Utica, Michigan
SCC Sever **Jose Moreno**
http://members.tripod.com/~helpme/
SOL BBS **520 882-0388**
Tucson, Arizona
Club BBS **847 632-5558**
Arlington Heights, Illinois

If you know the Internet E-Mail address of a Sinclair user, but do not have access to Internet, simply address your E-Mail to GATOR Sinclair on the 24-hour **Club BBS** and include the name and E-Mail address of the user you wish to reach. Then check the Club BBS from time to time if you expect a reply.

We encourage you to exchange mail and contribute to the UPLOAD section. Call and *register* using your first, last name and phone number along with a password you won't forget. ***Write It Down!*** Do not try to do anything else at this time.

When you call-in the next time, you will have Level 5 security and be able to enjoy full user privileges. The BBS has smaller sections called conferences. Select "J" for "Join a Conference". Select "TIMEX" to get into the Sinclair Section. The mail you then read will only be from other T/S users. Use extension ART for articles, ADS for ads and NWS for news when UPLOADing.

For help, contact the SYSOP, Bob Swoger, by leaving a message mail, E-Mail or phone
CENG108@email.mot.com

Input/Output

by Abed Kahale

I got the newsletter, ZQA! - another great job! Nice comment made about the Arizona scenery!

J Sheperd and his wife Karen and son Adam - are coming out to the Glenside picnic this Saturday Sauter and Herre will be here also 26 people expected.

---GATOR---

This has been like a very long lost weekend for me I just realized that I haven't received any Timex images for a while I am guessing that my subscription elapsed and I was more concerned with hands that didn't work (rheumatoid arthritis) How much to get reinstated and collect backs issues that I have missed?

By the way thanks for the humor messages You will notice that this is a different e-mail address and I would rather use it. Thanks again

Les Cattrell

A ZQA! reader advised the editor of his displeasure because of publishing his opinions in a previous issue His Email contained material related to the Timex/Sinclair community, so it was published He did not advise that the material was not for publication ZQA! Newsletter is for and by T/S groups and anything related to T/S will be published unless the person so indicates that it is not intended for publication

This Newsletter is not the National Inquirer or NewsWeek. Most of us know or are familiar with those whose names appear in the Newsletter—the T/S family group The Editors feels that any and all T/S related material will be published unless noted otherwise

Editor

I was reading what Bob Hartung wrote about the nice photos you put in the newsletter and got to thinking that maybe T/SNUG could "spring" for a color printer for you so you could send us those beauties in color! Heck, you can get a good color printer these days for around $200 and all you would have to do is print out as many title pages as you needed and still do the rest of it on a copier I suppose it might be more hassle than what you're doing now, but it would sure be pretty neat. Anyway, if it takes a vote of the membership I'll cast mine in favor ;-)

I've gotten a little more interest in the RMG items, but it has really slowed down lately That's OK, as I've been pretty busy at work Summer is the busy time for bridge and highway construction and I've been putting in a lot of hours It's just now starting to slow down a little Right now I'm in charge of 5 projects with a total cost of about $23 million. Kind of mind-boggling sometimes I still haven't heard from Dan Elliott since he sent me the card letting me know he was getting to work on the LarKen and 2068 I sent him. That's been at least 2 months ago I think I'll give him a call tonight to see what's going on. Anyway, thanks for your work on ZQA and helping keep these computers alive

Take care, **Jack Boatwright**

I Wish, I wish, I wish we could have color pictures in the Newsletter, but the cost will be prohibitive at $1 00 extra per one copied page Etc .... etc ...

Hello Abed,

I know the cartridges are pretty expensive, but it still would be neat to see those pictures in color! Tell you what, I'll chip in some $ if you think it would be something you might do

I still haven't heard from Dan Elliott since he sent me the card letting me know he was getting to work on the LarKen and 2068 I sent him. That's been at least 2 months ago I think I'll give him a call tonight to see what's going on.

Yes, you better give him a call, he either forgot about you or it is a bigger job than he thought

I did call him and got the answering machine Hopefully I'll hear something more from him soon. In an email I got from Jay a while back I thought he indicated that he was going to send one of the ones that Rod sent him, but so far I haven't seen it either I haven't had enough time to set up the Oliger with LarKen DOS that I bought the last time I picked up stuff at Rod's I should just make sure it works

Yes, I would like to be on your humor e-mailing list Some of it is pretty funny With the way things are going in Washington these days, we need some humor Later,

Jack Boatwright

To Gil Parrish
107765 1161@compuserve com
Cc akahale@compuserve com
Subject ZQA! Vol. 8 No 3

Puzzle

Hi Gil and Abed,

I'm writing my answer on your "puzzle-request" in ZXir QLive Alive! as an article, so Abed can use it for the next issue

In ZQA! Autumn 1998 on page 6, Gil Parrish asked for help about a video interface. Of course it's a little bit difficult to do some telediagnosis from good old Germany, but I think I will not be wrong with the following information

Your interface is a colour-interface-module for PC8300 We have some of them in ZX-TEAM too

Plug the interface into your PC8300, connect the short lead with the monitor jack of PC8300 and connect your Colour TV set with the UHF connector, channel 36, or your colour-monitor with the monitor connector

But if this will not be successful, first have a look into your Colour-interface If you find a crystal with 3 579 MHz it will be a NTSC interface for the use in the USA. If you find a 4 433 MHz crystal, it is a PAL-type and you can't use it in the USA.

The interface works as follows It has 1K Byte RAM-memory in the area 8192 - 9216, used as the colour-file. In PC8300 the display-file address is fixed and not floating like in ZX-81 This is important for the use of the colour-interface The colour module takes the display-file information from the monitor output of the PC8300 and will "mix" it with the colour-file from the interface to build the colour-signal

Happy ZXing from Germany
yours "sinclairly" **Peter Liebert-Adelt**

P S join the ZX-81 mailing-list! send an email to "listserv@jarasoft.xs4all nl" with "subscribe ZX81" in the subject line

GERMAN ZX-TEAM

e-mail p liebert@t-online de
http //home t-online de/home/p liebert/zx-team htm
Peter Liebert-Adelt
Luetzow Str 3
D-38102 Braunschweig
Germany
Amateur Radio DK4BF@DB0FC #NDS.DEU EU

Hello Abed.

I understand that you are the man to contact concerning membership to T/SNUG and subscribing to the newsletter I was BBS sysop and software librarian for the **Ottawa-Hull** Timex/Sinclair User Group until it folded for good around 1993 I also wrote articles for our newsletter as well as for Your Sinclair, Time Designs and Update!

I sometimes use a real live T/S 2068 but for the most part I am now using Gerton Lunter's ZX Spectrum emulator whenever I need to run Sinclair software

I still have in my possession all the software —which has been converted to the LKDOS platform for the most part — and most of the periodicals and news letters that were owned by the club I would be happy to share whatever I (legally) can with whomever is interested.

I am keenly interested in programming HiSoft PASCAL for the ZX Spectrum which I run on both the T/S 2068 which has been fitted with a ZX Spectrum emulator and on Gerton Lunter's emulator At the moment, I have not written any serious applications in HiSoft PASCAL Most of what I have written has been done out of curiosity to see if the old T/S can do such-and-such a thing. For the most part I have succeeded! I have found HiSoft PASCAL to be very versatile and able to do as much as can be done in Sinclair BASIC and a heck of a lot faster Most recently, I have written a function for creating UDGs within a PASCAL program I hope that I can find a kindred spirit among the members of T/SNUG I close in the hope of hearing from you soon.

David Solly
ac355@freenet carleton ca
Ottawa, Ontario, CANADA
Voice (613) 731-2120

My apologies to all especially to you, Abed, as it relates to delayed or unfulfilled space in ZQA. The bulk of the shipment is cassette SW, a lot of which is unlabeled or loose (unboxed) where only verification thru loading would prove its value Is this a daunting task or what? Anyway, I decided part of my problem was trying to find this stuff on the list, when it wasn't even there or what I had was a partial to the list.

Also, many of the items need to have a description to complete their value and then there's the desire to know if it works or if two or more, does one work and the other is only good for parts and how to decide who gets what or do I just reach in and ship and let whomever get whatever

13 QL's this was the kicker, not on the list and some work, haven't tested all
11 2068 some work didn't test all
31 1016 16K RAM PAK in original boxes
11 Magicbridge 16K RAM w/ made in Gr Britain on box
1 Memotech 32K RAM w/ a feed thru so you stack another 16K/32K on w/ docs
3 cases 48ea 2040 thermal paper on unopened - tested one Ok.
1 Miracle-disk adapter for Trump Card (QL HW)
4 2040 thermal printer - in orig boxes like new
8 Alphacom 32 thermal printer
2 A&J 2000 drives w/ 30 wafers
13 LKDOS A3 dock board **EPROM's**
13 EZKEY keyboard interface PCB - no chips just the board

I included the last two items to show the variety of the misc stuff that's not listed There are dock boards w/chips that I have no way of knowing what they are except that two are marked w/**Oliger's** name One says **Oliger User Cartridge** The other **JLO 8084** I could throw them into a 2068 and see what comes up on the screen. Or they could be fried and could fry a good 2068????? And all of this takes time. Later,

J Shepard
Jshepard@netins net
John J Shepard III
281 130th St
Ogden IA 50212
515 846-6378
Hiroshima '45 - T/S '83 - Chernobyl '86 - Win'95 & Win'98

Hi Abed,

I finally managed to hook myself up with a 2068 (thanks to Frank Davis) In order to help with my addiction, I've set up a email list on my server I'm also working on a website, but that's a few weeks off from being online (digitizing manuals, researching components, and whatnot)

I'm writing to invite you and anyone interested within the T/SNUG crew aboard. **To subscribe**, do the following Send an email message from the account you want to subscribe to

Majordomo@unixville.com

with no subject and the content of the message as follows **subscribe 2068**

You'll receive a confirmation reply notice from the list mail program, following the instruction to complete the signup If you need to contact the list administrator, send email to

2068-owner@unixville.com

I was hoping that you'd put this little note in the T/SNUG newsletter

If anything, let me know when the irc meetings are, and I'll try to make an appearance Also, how can I subscribe to get the newsletter? Thanks!

Louis Florit 2068 List Admin

See Your Hometown As Viewed From Space

Satellite Images of the USA now online at http://observe ivv nasa.gov/nasa/gallery/landsatapp/landsatappdesc html

Ever wonder what your hometown looks like from outer space?

You've heard stories about China's Great Wall being visible from the Moon (stories that, well, aren't true), but now you really can check out the Earth from far above In an online article, NASA's Observatorium lets you observe the continental United States—including your town—through "Satellite Images of the USA."

It's online now at
http //observe ivv nasa.gov/nasa/gallery/landsatapp/landsatappdesc html

Satellite Images of the USA is a collection of Landsat satellite images that allows Web surfers to take a virtual tour of America from high above At your fingertips are images of the US you've probably never seen before -- the country's color, water, vegetation, forests, cities, and more, as seen from an orbiting space satellite

After downloading the images (they're 130K, so allow some download time), visitors to NASA's Observatorium can view the US from more than 700 mile s above Earth The exhibit provides a key for viewer interpretation of the images, and lets you explore, from an outer space perspective, specific are as of the country in simple point-and-click fashion

Its homepage is located online at
http //observe ivv nasa.gov20
CONTACT Scott Gillespie
NASA's Observatorium curator@observe ivv nasa gov

Mike and John, Don and Bob,

I am getting ready to get out of the Z88 and the QL business on computers. My Amiga business is so large I do not have time for all of them I am willing to part with a large amount of stuff, very cheaply, such as MacLinks for $5, Serial cables for $3, one Meg RAMs for $80, etc If interested let me know I have a South American who has expressed an interest but have told him I want to check with you USA first Contact me soon on this as time is important A good chance to get a lot of stuff very cheap and keep it here in the USA.

Frank Davis
FWD Computing
fdavis@iquest net
http //members tripod com/~FWDcomputing/

Just got this this evening, Abed I'm shocked! I don't know that I want this out in the news just yet until we hear more and think this over --==GATOR==--

---

I should have done what I just did before sending that last note yesterday, but anyway here it is

To get a better understanding of what's going on with Frank and some great news at the same time you need to visit his Web site
http //members tripod com/~FWDcomputing/index.html
you won't believe what's there I'm not sure how it all relates to his offer to Fink, which doesn't please me, but I'll bet you can call him, Bob Please do The bottom line is that what's on his web pages provide info that could excite all of us orphan owners and could reinvigorate the club and the members Let us know what you find I'm writing for the Z-88 catalog of ritajean@hotmail.com next Later,

J. Shepard

Hi Abed,

The banks, post offices and exchange house have conspired to make payment of membership dues very difficult

1) US post offices no longer accept Canadian postal money orders -- even when drafted for US dollars
2) The banks charge an outrageous exchange rate on small amounts and $4 50 handling fee. An international bank money order for US $12 is about Can $22.50!
3) The exchange houses will not sell less than US $20 in US dollars Therefore, I was thinking of sending you.
1) A personal check for Can $18 plus barter, or,
2) Can $15 in bills plus barter

As barter, I have about 5 articles on HiSoft PASCAL -- both programs and programming—in WordPerfect 5 1 format which I can put on a diskette and send with my subscription. There is probably enough material to create a whole issue dedicated to PASCAL programming on the T/S 2068

Please let me know what you want

Please give me your snail mail address so that I can mail you a copy.

David Sally
1545 Alta Vista Dr Apt. 1402
Ottawa, Ontario
Canada K1G 3P4

I would like to have the above in the next ZQA! issue if you don't mind?

I have no problem with that

Take care. David Solly ac355@freenet carleton.ca
Ottawa, Ontario, CANADA Voice (613) 731-2120

>"If anything, let me know when the irc meetings are, and I'll try to make an appearance "

I am missing something here Please bring me up to date What/Who is IRC?

Hehe, I'm confusing groups here. There is a NY Sinclair club that has monthly meetings in NY and simultaneously on IRC (internet relay chat) I think they get together once a month, either the first or second Sunday of the month But I'm not sure If I find out I'll let you know, OK?

Thanks **Louis Flarit**

Hi Abed,

I'm writing from work because I just remembered something I wanted to tell you and have been forgetting. TEJ Computer Services is still alive, at least a little The owner is **Terrance Jarvis** and he still has TS items The reason my mail came back is that he now has a different address.

I've bought a few of his 2068 software programs for $4 each. He stated that he had hardware and software for TS computers I've been trying to get a list of his items for quite some time now, but haven't seen one yet I'm not really sure if he wants to be re-listed in ZQA! or not I mentioned to him that his listing was dropped and that he should contact you, but I don't think he has

If you want to contact him his email is tej@jps.net

Jeck Boatwright

From "John J (Jay) Shepard, III" <jshepard@netins net
Subject Fw Z-88 catalog
Date Mon, 12 Oct 1998 21 35 09 -0500
>Thought you two might like to read this I got her email address as a link on Frank's web-site I included the garbage it took to get it here as I've never seen that much before. **J**
>>From Rita Willis <ritajean@hotmail com
>>Subject Re Z-88 catalog

Please send me your catalog. I'm most interested in being able to interface my V 4 Z-88 with my PC and QL Snail mail address is 281 - 130th ST, Ogden, IA, 50212. Fax numbet is same as reg ph , 515-846-6378

If you have use for it, please send after midnight Central Daylight Time to lessen confusion of occupates trying to answer a fax call. Thanks, **J**
<<< Hello J (?)

Frank Davis has told me of you that you were a Sinclair user Saul and I are presently on a sabatical for a few months touring Europe We are in the process of buying out Frank (some of his stock is going to go down to Texas I think to John Rish who has done z88 repairs for the last several years

Til we are back Frank and his wife are doing the shipping and such for us We have a package for the PC/QL to Z88 It includes all needed cables, QL software on MDV, PC software on plug-in Eprom cartridge and PC disk. We are selling them at this time as a combo for $40 Should you want one before we get back (sometime between the end of Decmber and the middle of February) just go ahead and send the order to Frank and he will take care of it Otherwise you could just wait. We felt we needed a long vacation after spending 30 years with the State Dept. Sincerely,

Rita Jean Willis
ritajean@hotmail.com

Show

Just a short message to those on this list and their interested friends For those of you in places other than North America (and who feel you can afford the trip or just want to make it part of a vacation) as well as those in North America — we are looking at having two QL and it's derivatives (as well as other Sinclair and Cambridge based computers) shows here in the USA next year One will be near San Francisco on the West coast and the other a bit inland from the East coast (probably back at Bedford, PA) The time period being looked at is in either May or early June of 1999 Tim Swanson and Don Walterman (both on this list) are looking to be the anchor men out West, and unless someone else wants to step up and do it, then my wife Carol and I will once again do it on the East coast Now what I need are for people to let me know they are truly interested and if so, what they would like to see repeated or changed about the previous shows **If I do not hear from enough people...** then I shall just drop the whole idea and figure you have on interest. This especially goes to all the lurkers and people who only on a great occasion feel the urge to speak up As anyone who has ever put on a show can tell you there is a lot of work that goes into it We want it to have enough people to make it worthwhile for dealers both in North America and elsewhere to make the trip Yep, you guessed it... that means they need for people to *not* just come and talk, but to part with some of their money that is what fuels further development It has to at least pay for itself even for hobbyists None of them are under the illusion they will get rich by vending at a QL show... but it at least has to pay for itself and all the extra would not hurt

End of commercial, now back to your regular broadcast Most replies to this can be made directly to me rather than the group, unless they are a need to know item for others

Thanks!!!

FWD COMPUTING
fdavis@iquest.net
http://members.tripod.com/~FWDcomputing/
Working to make computing fun!

Hi Abed,

I have finally published my very primitive TS web page I'm still not ready for general release to the public as I can't get the few links I have to work right

Anyway, I thought I'd let you take a look and give me some feedback. I will continue to improve it, but have been very busy with work and family so don't have a lot of time It's at http://www.outlawnet.com/~jboatno4

Take care, **Jack Boatwright**

♪♬♯♭♮♬ Yesterday ♪♬♯♭♮♬

♪♬♯♭♮♬ Yesterday, ♪♬♯♭♮♬
All those backups seemed a waste of pay
Now my database has gone away
Oh I believe in yesterday
♭♮♬♪♬♮♬ **Suddenly,** ♭♮♬♪♬♮♬
There's not half the files there used to be,
And there's a milestone
hanging over me
The system crashed so suddenly
I pushed something wrong,
what it was I couldn't say
Now all my data's gone away
and I long for yesterday-ay-ay-ay
♪♬♯♭♮♬ Yesterday, ♪♬♯♭♮♬
The need for back-ups seemed so far away
I knew my data was all here to stay,
♪♬♮♬ Now I believe in yesterday. ♪♬♮♬

Abed,

I have about 4 articles ready to send you They all deal with HiSoft PASCAL programming In fact, there is probably enough to to make a special PASCAL issue of ZXir QLive Alive!

Will you have any problems decoding Unix-to-Unix Encoded Word Perfect 5 1 (DOS) files? I believe I asked you this before but I seem to have lost your reply Also, are you familiar with what a PASCAL source code listing should look like? I am sure you do but I am asking because I once submitted a source code listing to a newsletter as a WP 5 1 file only to have it botched up because the editor used a proportional font to print out the file which ruined all the indentation in the source code listing.

If you get back to me, I could probably send you some files tonight

David Solly

I can decode almost any TEXT format
Articles are welcomed, anytime !!! Thank you

Dear Abed,

I am sending you a check for $20 towards my next year's membership subscription to help keep ZXir QLive Alive! and well I really enjoy being kept up to date on what is going on in the Sinclair world

I have a problem that you may be able to help me solve I am just about 82 years old and find that I have accumulated a whole lot of Sinclair computers, an original McIntosh that is a Mac Plus, and even an old TRS-3 with two 80 track DSDD drives I have a ZX-81 with a full keyboard, program tapes 64K memory, two Westridge 2050 modems with Smart Terminal 1 I also have a Timex 1000 plus many folders of documentation for these computers

I have a TS-2068 with AERCO 40 track DSDD floppy drives plus the CPM program with 80 character lines and documentation plus LKDOS plug-in V3 for FD-68 disks I also have an interesting adapter for the 2068 that lets you write out phonetic words and sentences in English and it will actually read what is written and speak it back on the adapter's loud speaker This program uses the three voices of the 2068 built-in sound chip to accomplish this amazing feat

I have an extra QL computer that I find as surplus and not needed anymore

What would I do with this equipment to put into someone's hand who will want it? I am not thinking of selling it but **maybe I could give it away to someone who would use it for a good purpose.**

I will keep my QL with its GoldCard, Minerva ROM, Hermes 220, two 5 ¼ 80 track DSDD floppies, two 3 ½ ED floppies, and a Qbide hard disk setup and a Seikosha serial printer 1 will keep my Z88 with its Epson serial printer as I find it very portable and it works with my Mac as well as the QL For the moment, I will keep the Mac because of the info currently stored on its hard drive and the several programs and fonts available that are not on the QL.
As you can see, I really have to peel down and dispose of some of this computer equipment before 1 get too senile to use any of it. I find That I haven't used the ZX-81's and TS-2068 at all now that I have the QL setup

A second problem that you may able to **help me solve is to find a working copy of Assembler WorkBench V 1.5 by Talent Computer** in England. I wrote to them but they must be out of business since they never answered my letter Their program came on a micro cassette to act as a key so that the program will boot properly My original tape and its copies all failed by the tape getting stuck in the cassette case so it won't play at all. I have all the programs properly copied on my disks but the necessary keyed tape is missing. Do you have any suggestions of where to look for a good working copy of Assembler WrokBench?

Please keep up your good work for us Sinclair users as this is one set of computers that I can program and understand without a lot of new learning required. The programs I use are simple and 1 do not need fancy Windows 98 etc. to do the simple tasks I need to accomplish.

Sincerely,
John Pegram
1126 Stradella Rd.
Los Angles, CA 90077
310 472-2467

Dear Abed,

I did buy many items from Jack. Thank you for the information

I have plenty of other computers. an IBM compatible and some Commodore ones but now I am concentrating on the Timex computers, because there may be little or no electricity available on and after Jan. l, 2000

Last year I bought an inverter for my car that puts out 250 watts of continuous AC power, enough to run a Timex 1000 computer, Timex 2040 printer, and a small black and white television set By using a <long> extension cord computing is possible from inside the house

Your friend,

Jerry Anson
jerrya@aztec2 asu edu

Hello Abed,

He got the Larken fixed (had to replace 5 chips), but had a note saying the SCLD chip was out on the 2068 and he couldn't fix it. I have another 2068 so that's not a huge problem. I haven't had time to set it up and may not until after the holidays are over. I'm taking 2 weeks off starting the 19th, so maybe

I'll still get it set up before the New Year

Take care and Happy Holidays,

Jack Boatwright

Dear Sinclair Users

This letter is to announce the West Coast Sinclair Show, tentatively scheduled for 5 June in Union City, CA. Before going too far into organizing the Show we are looking into how many local Sinclair users would be interested in attending the Show Based on this survey, we can either press forward with the show or cancel it due to lack of attendance

Place. Union City CA (15 miles south of Oakland & 15 miles north of San Jose}

Date: 5 June 1999

Time: roughly 10 00 am to 5 00 PM (subject to change)

Cost approx. $5 - $8 (depending on cost of show location)

Motel of Choice: South Hayward Motel 6 (510) 489-8333

The Show will have something of interest for all Sinclair users (ZX-81, T/S 1000 T/S 2068 QL, and Z88) We plan to have a number of dealers from Europe, primarily Jochen Merz Software and TF Services (Tony Firshman) There is a lot of new development in the QL world, including a whole new QL/QDOS based system called the Q40, and the Milan, an Atari-based system that will run SMSQ, a QDOS based operating systems.

For the Z88 there is a new newsletter coming out of Ireland and a bunch of newly available applications It appears that FWD Computing (Frank Davis) has dropped support for the QL and Z88 so we are looking to find out who will pick up his service. For the T/S-2068 and T/S-1000 fan we plan to have some information about MS-DOS based emulators for both computers, including the new XtenderII

We still do our best to make the show interesting for all Sinclair users In addition to vendors and information there is always the enjoyment of meeting others that share the same computing interest. Many of us compute by ourselves and rarely get a chance to talk to another Sinclair user After attending a number of US QL shows, we know that the camaraderie is the best part of the show

For the very local or those staying in a Motel, on the night before the show there will be an informal Bar-B-Q held at Tim Swenson's house, just I 5 miles from the Motel 6

What we are asking of you, is to let us know if you are interested is coming to the Show The existence of the show depends on getting enough attendees to make it worth the trip for the European vendors. This is not a commercial show It is a show put on by a Sinclair user for other Sinclair users Please contact Tim Swenson via phone Mail, or e-mail if you are interested in attending or have any questions If you are no longer a Sinclair user and do not want to be contacted farther, please let Tim know and he will let other mailing lists owners know

We hope to see you there,
The West Coast Sinclair Show Organizers
Don Walterman
& Tim Swenson
2455 Medallion Dr
Union Cit CA 94587
(510) 489-8944 swensont@jack.sns.com

Sinclair E-Mail

Albrecht, Alvin	aralbrec@concentric.net
Anderson, Paul	p.aderson@cwix.com
Anson, Gerald	jerrya@aztec.asu.edu
Barker Robin	Robin@di-ren.demon.co.uk
Bennett, Dave	dbennett10@desupernet.net
Boatwright, Jack	jboatno4@outlawnet.com
Boehm, Al	boehm@ziplink.net
Boehm, Bill	boehm@plh.af.mil
C.A.T.S	mf0002@epfl2.epflbalto.org
Cable, Bill	bcable@triton.coat.com
Chambers, George	gfchamb@pathcom.com
Collins, Bill	bcollins@home.ifx.net
Cottrell, Les	jacottre@gte.net
Cruz-Figueroa, Jaime	cruzfiguer@aol.com
Dansby, Andrew	adansby@atlantic.net
Davis, Frank	fdavis@iquest.net
England, William	wengland@iname.com
Feng, Al	alfeng@juno.com
Fink, Mike	domino.cubes@excelsior.net
Florit, Louis	florit@wormhole.unixville.com
Franke, John	j.m.franke@larc.nasa.gov
Ganger, Gary	gangerg@dma.org
Gillespie, Doug	aa431@cleveland.freenet.edu
Girnius, William	girnius_w@bls.gov
Harbit, Ken	krh03@csufresno.edu
Henderlight, Mike	mikehend@microsoft.com
Henn, Fred	oranur@juno.com
Hunkins, James	jdhunki@ibm.net
Impellizerri, John	jimpellizerri@compuserve.com
Jaap, Matthias	Matthias.Jaap@hhs.hh.schule.de
Jonas, Mike	mjonas@bbn.com
Jones, Terry	tjones@iname.com
Kaczor, Jon	75363.1127@compuserve.com
Kahale, Abed	akahale@compuserve.com
Kealy, Harriet Joan	hjkealy@admin.hilconet.com
Kingsley, Ed	elk4@aol.com
König, Urs	urs.koenig@agrodata.ch
KurtK7	kurtk7@aol.com
Kwitkowski, Phillip	kwit47@aol.com
Lancaster, Garry	dharkhig@delphi.com
Lassov, David	emanon@azstarnet.com
Lebowitz, Dave	dkl@dpliv.com
Lessenberry, Gary	glessenb@usr.com
Liebert-Adelt, Peter	p.liebert@t-online.de
Malloy, Bob	74776.1161@compuserve.com
McKelvey, William	mckelveyw@delphi.com
Merz, Jochen	jochenmerz@j-m-s.com
Miller, Seymour	seymil@delphi.com
Muth, Bob	bobkeeper1@aol.com
Norton, Gary	gnorton@world.std.com
Parrish, Gil	107765.1161@compuserve.com
Pashtoon, Nazir	nazir.pashtoon@ingram.micro.com
Payne, Josh	joshpayne@bigfoot.com
Pazmino, John	john.pazmino@moondog.com
Perry, Russ Jr	slapdash@enteract.com
Rigter, Wilf	rigter@cafe.net
Rish John	74601.1535@compuserve.com
Shepard, Jay	jshepard@netins.net
Simon, Thomas	73177.333@compuserve.com
Skapinski, Tom	tskapins@juco.com
Smith, Dennis	denny.smith@juno.com
Solly, David	ac355@freenet.carleton.ca
Stegman, Dan	dansteg@juno.com
Swenson, Tim	swensontc@geocities.com
Swenson, Tim	swensont@surclive.csd.sgi.com
Swentko, Wally	wswentko@maroon.tc.umn.edu
Swoger, Robert	ceng108@email.mot.com
Taylor, Jeff	jetaylor@spar.ca
Thoresen, Jeff	74200.257@compuserve.com
Walterman, Don	walterm@ix.netcom.com
Washington, Barry	mf0002@epfl2.epflbalto.org

BUG in SOL BBS

Well, I found one, and there may be others, as you can see

After Larry Kenny called the BBS, we decided to receive remote messages with the use of the instruction INPUT#7,A$, since it is implemented at the (fast) system level, rather than in Larry's (slower) BASIC code

Yeah, but INPUT A$ cannot accept quotation marks in A$

So, this is a request for any additional characters besides ", the quotation mark, which causes the INPUT A$ instruction to blow up !

KEEP ON TIMEX'n

David E Lassov Sysop,
SOL BBS @ 520-882-0388 (data) 520-882-3972 (voice)
emanon@azstarnet.com (email)
2590 N Jordan DR
Tucson AZ 85745-1132

Abed,

First, thanks for the cartoons, they help to brighten a busy and overworked day For a few weeks now, with the Xmas season upon us we have been getting between 2-300 Amiga software orders a day, so are quite busy

I had meant to do up an ad for the next issue but seem to have run out of time

All of my Z88 and QL stuff is sold. What I do have left is T-shirts for QL, TSNUG and Z88. I also have mouse mats for them I also still have my Speccy97, Retro Gold and Speccy Classix CDs and amiga Forever CDs that were in my last ad. Prices are the same and what is not sold by the end of January goes to Brazil. Anyone who wants any of this had best do so soon

Thanks, Frank

FWD Computing
PO Box 17
Mexico IN 46958 USA
fdavis@iquest.net
http://members.tripod.com/~FWDcomputing/
Working to make computing fun!

FROM THE CHAIRMAN'S DISK 🖫

Donald S Lambert

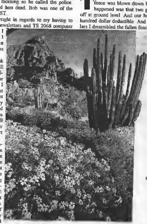
I wrote to Tim Swenson to ask about the 2050 serial port to Z88 and he gave me what he thought was the proper way to interface it. But it leaves a little to experiment with. However I leaned that Tim now has a house and a new address. (see Unclassified Ads section)

Had a call from Fred Stern and he reported that Bob Gilder died on or about the first day of November A neighbor had noticed him sitting at the kitchen table in the evening and he was still there and looked like he wasn't moving the next morning so he called the police. They broke in and found him dead. Bob was one of the dedicated members of LIST

Wrote Jack Boatwright in regards to my having to dispose of my newsletters and TS 2068 computer equipment and I haven't heard from him I had offered to send it shipping free so I guess the offer still goes.

While I have disk drives that will work on the TS-2068 and Oliger or LarKen disk interfaces I won't ship them without postage reimbursement since they are really heavy The drives would include several drive cases with power supplies. I will need to know in December since I will have to start cleaning them out soon.

A move is contemplated from here in Auburn during the year of 1999 and at the moment where to is not sure. I have been given the ultimatum of not moving boxes and boxes of computer JUNK! The JUNK! is my wife's words not mine. Later I will work with an MSDOS clone of some kind and will very likely have the ZX-81 and TS-2068 emulators as well as the SPECTRUM. And I will still have the Z88 so I will still be in the TS community



I saw Frank Davis last Saturday at the Ft. Wayne Ham and Computer Fest Since Frank is mainly into Amiga he is doing great in that field Still has some Z88 and that sort of stuff to sell.

Been having a lot of household troubles Not with my wife but the house. First we put in a new dishwasher and when the disposal was disconnected from the old dishwasher the connector on the disposal for the dishwasher discharge hose was broke off to the point where it barely could be clamped to So I replaced that All I can say they sure have made it easier to replace with a different type of assembly I have put in three prior disposals and all of those had to be hold up while you tried to connect them up to the sink. Now you connect a subassembly to the sink and then you rotate the disposal into place which makes it very easy And the first time I did not have to redo the plumbing to get it to fit I was amazed at how easy it was

The night of November tenth a portion of our privacy fence was blown down by the storm. What actually happened was that two posts had rotted and broken off at ground level And our homeowner's insurance has a hundred dollar deductible And so to save the hundred dollars I dissembled the fallen fence and horrowed a clamshell post hole digger and dug two holes next to the cemented in old posts and set in place two new post of pressure treated 4 X 4's. The lumber and the two bags of readymix was delivered Monday I finished the fence yesterday (November 18th)

Sunday (November 15th) our garage door opener quit raising the garage door The helical gear that the worm gear that is on the motor shaft turns apparently has stripped all the teeth off So Tuesday we went to Sears to see if they had an opener that was similar to the one that died There are some differences could have probably used the same track and chain but I didn't want that to go bad and have to redo the installation. I started that this morning and right now I am installing the light beam and sensor which is a feature that is mandatory for garage doors now Supposed to prevent injury to a child or dog or even a person. In the morning I will finish the installation and then do the set up for proper closing and for the safety features Right now I open and close the door manually and lock it by Clamping a C clamp on the track I lucked out since they had these units on a special purchase and sale plus a coupon discount The old unit was in use 16 years The life of a garage door opening is from 15 to 20 years

Looking at the electronics of the garage door controller I see that it could he easily converted to turn on something It would make an interesting project

Back to uploading and down loading programs from the Z88 to the TS-2068 I remember seeing an article about how to use a modem to modem with out Ma Bell being between. I will find that and get the 2050 modem and the Z88 modem going - I hope.

I have been looking at the PC's and have started to figure bout when some of the salespeople are spoofing me. I was originally wanting to use a ZIP drive BUT! I was lead to understand that would be better off with a CD ROM burner The disks are about a fifth the cost and there is a lot more capacity on the CD

With all our trouble with our house I guess we are lucky since we don't have hurricane or flooding damage. I have seen the destruction in Germany during W W II and in Korea during the war in 1950 and 1951 If you don't have too much and you loose that

This is it till next time 0/0

Using FOP_OVER

by AL Feng

Over a year ago, I read a request asking how to use the FOP_OVER facility found in TK2_EXTensions instead of OPEN_NEW

Others are better qualified to explain some of this. Let me simply state that you need to OPEN a device before you can access it, and, when you are done using it, you should CLOSE it.

Using FOP_OVER lets you set an error trap for a "bad" medium – where "bad" can mean any of a variety of problems such as a missing physical medium. If the error is recognized, instead of having the program crash, recovery can be to another location in the program.

The following examples are actual PROCedures used in both QLAMBer (FOP_OVER) and QLATter (OPEN_NEW) I hope this is still useful information, and my apologies for its tardiness.

HERE'S HOW

Comparing and contrasting should be the easiest way to see how comparable tasks are implemented, so, this is more show then tell

To begin with the obvious, here is the PROCedure used in QLATter

```
 650 DEFine PROCedure Access  DIM Z$(610,32)
DELETE t$&a&F$
660 OPEN_NEW#6,t$&a&F$
670 DIR#6,t$a&"_"&RN$  CLOSE#6
680 OPEN_IN#7,t$&a&F$  FOR c=0 TO 610
690 IF EOF(#7) THEN EXIT c
700 INPUT#7,Z$(c)  END FOR c  CLOSE#7  c=c-1  END
IF   END DEFine
```

You should be able to see that the PROCedure using FOP_OVER is very similar

```
650 DEFine PROCedure Access  DIM Z$(610,32)
DELETE t$&a&F$
660 uk=FOP_OVER(#6,t$&a&F$)
   IF uk<0 THEN iX  CLSd  AT#2,24,37  REPORT#2,uk
   PAUSE 50  zCLS  tre=0  WCh
670 DIR#6,t$&a&"_"&RN$  CLOSE#6
680 OPEN_IN#7,t$&a&F$  FOR c=0 TO 610
690 IF EOF(#7) THEN EXIT c
700 INPUT#7,Z$(c)  END FOR c  CLOSE#7  c=c-1  END
IF
   END  DEFine
```

Z$(q,l) is a DIMensioned array where 'q' is the number of entries (in this case 610, two of which are related to the medium header) and 'l' (the filename length is 32 characters long in this instance)

I use varubles, but you don't have to

```
   t$ = "flp"
   a = 1
   F$ = "_FLIST_imp"
   RN$ = (this is optional, and, can be omitted)
   nnn DEFine PROCedure iX  PRINT "invalid
device":END DEFine
   nnn DEFine PROCedure zCLS  (clears part of the
screen)
   nnn DEFine PROCedure WCh  (this is where I want the
program re-directed, 'tre' is a pointer)
```

I hope these two examples and limited explanation are adequate

If you have any questions, feel free to contact me

Happy Trails,
And Computing, To You ....

A Library of LarKen Procedures and Functions in HiSoft™ PASCAL for Sequential File Handling

Written by Larry Kenny

Edited by David Solly

This HiSoft PASCAL source code provides the procedures and functions required for reading and writing sequential files to a LarKen DOS formatted diskette.

Program LkDOSLib,

A Library of LkDOS File Procedures and Functions
OpenFile- Open For Sequential Read
RdChar - Read 1 Char From File
Eof- True If Last Char Has Been Read
CloseFile - Closes Buffer, Frees DOS Commands
GoToDrive - Select Drive 0 or 1
Catalog - Simple Cat List

History:

Written by Larry Kenny
Navan, Ontario, Canada, 1989

```
VAR C : CHAR;
A : INTEGER;
FLAG : BOOLEAN;
FUNCTION Eof : BOOLEAN;
BEGIN
```

```
INLINE(#CD,#62,#00,#3A,#0F,#20,#FE,#40,
#28,#04,#3E,#FF,#18,#01,#AF,#DD,#77,#02,
#CD,#BA,#00);
 END;
-----------------------------------------------------------
PROCEDURE Catelog;
 BEGIN
 INLINE(#F3,#CD,#62,#00,#AF,#32,#1D,#20
  ,#CD,#7E,#00,#CD,#7B,#00,#21,#88
  ,#20,#3E,#0D,#D7,#06,#03,#23,#7E
  ,#FE,#FA,#28,#20,#FE,#FF,#20,#F6
  ,#23,#7E,#FE,#FE,#28,#F0,#7E,#FE
  ,#FD,#28,#06,#E5,#D7,#E1,#23,#18
  ,#F5,#05,#28,#DD,#3E,#20,#D7,#3E
  ,#20,#D7,#18,#DA,#CD,#BA,#00,#00);
WRITELN;
 END;
-----------------------------------------------------------
PROCEDURE GoToDrive(DV:INTEGER);
 BEGIN
  IF (DV=0) OR (DV=1) THEN
BEGIN
DV:=(DV+1)*2;
POKE(23728,CHR(DV));
INLINE(#CD,#62,#00,#3A,#B0,#5C,
#32,#03,#20,#CD,#BA,#00);
END
  ELSE WRITELN('NON-EXISTANT DRIVE');
 END;
-----------------------------------------------------------
PROCEDURE OpenFile;
 BEGIN
 WRITE('ENTER FILE TO OPEN  ');
 READLN;
 INLINE(#CD,#62,#00,#21,#0F,#77,#11,#22,
#20,#06,#0A,#7E,#FE,#20,#30,#02,
#3E,#20,#12,#23,#13,#10,#F4,#3E,
#00,#32,#B0,#5C,#CD,#24,#00,#3A,
#20,#20,#FE,#0A,#28,#2B,#CD,#87,
#00,#21,#44,#20,#22,#2C,#20,#2A,
#2C,#20,#23,#22,#2C,#20,#7E,#FE,
#F9,#28,#19,#32,#1D,#20,#CD,#7E,
#00,#CD,#7B,#00,#21,#88,#20,#22,
#7C,#20,#3E,#40,#32,#0F,#20,#18,
#03,#32,#B0,#5C,#CD,#BA,#00,#00);
 IF PEEK(23728,CHAR)=CHR(10) THEN
 WRITELN('FILE NOT FOUND');
 END;
-----------------------------------------------------------
PROCEDURE RdChar(VAR CH:CHAR);
 BEGIN
INLINE(#16,#05,#CD,#6A,#00,#DD,#6E,#02,
 #DD,#66,#03,#77);
 END;
-----------------------------------------------------------
PROCEDURE CloseFile;
 BEGIN
INLINE(#CD,#62,#00,#AF,#32,#0F,#20,#CD,#
BA,#00);
 END;
-----------------------------------------------------------
BEGIN {Mainline program and
Demonstration}
  GoToDrive(0);
  Catelog;
  OpenFile;
  REPEAT
BEGIN
 RdChar(C);
 WRITE(C);
END;
  UNTIL Eof;
  CloseFile;
 END
```

DataStore() and DataFetch()

Two LarKen DOS Procedures For HiSoft™ PASCAL *By David Solly*

When you have become spoiled by having a disk drive system on your Timex/Sinclair 2068, such as I have, you soon begin to wonder what use is there in having a compiler which allows you to write programs which are easy to maintain and run like wildfire when compiled but grind snail's pace when they have to access the cassette drive to store or fetch data. [1] This has been the problem with ***HiSoft PASCAL, Version 4*** compiler for the Timex/Sinclair 2068, (henceforth PASCAL), however, with the new procedures **DataStore()** and **DataFetch()** variable data can be stored to and fetched from disk under LarKen DOS

How The Procedures Work

All versions of PASCAL use a stack in one form or another to keep track of parameter passing amongst procedures and functions HiSoft PASCAL uses the IX register to perform this function. In the case of **DataStore()** and **DataFetch()**, thirteen bytes, starting from IX+2, become reserved in the IX register when the procedure is called. Depending upon whether it is the DataStore() or DataFetch() procedure that is being called, the first two bytes contain the number of bytes which are to be transferred to or from the disk. This number is usually passed to the procedure through the function **SIZE()**. [2] The next two bytes contain the start address of the segment to be transferred to disk or to where it is to be placed in RAM. This address is usually supplied through the function ADDR() The remaining nine bytes contain the name under which the data will be stored to, or, fetched from the disk In the demonstration program the variables Name and FileName have been created of the user defined type iostring to pass the file name from where it is read from the keyboard to the procedures Once the required information has been passed to the procedure being called, the INLINE routine in turn transfers the information to certain memory locations in the LarKen DOS cartridge and invokes the proper routines within LarKen DOS to store or fetch the data

Demo Program [3]

The demonstration program creates a small telephone directory in which you can store ten names and ten numbers The program will ask you to enter ten names and numbers to fill the directory Next it will ask for a name under which to store all the data which you have entered into the variable Directory to the disk Finally it will ask for the file name of the data to retrieve from the disk. When you first run the program you will have to reuse the name you just used to store the data or the program may crash. If you run the program several times and create a number of files on the disk under different names you can then use any of these names and the data stored under the name selected will be retrieved and displayed.

Program LISTing

TelephoneDirectory

Purpose

This program creates a small telephone directory to demonstrate how data can be write and read to disk under LarKen DOS using the procedures
DataStore() and DataFetch() and also to
demonstrate how a type may be developed to
emulate the type String which is found in
other versions of PASCAL

History

Based upon an example in the HiSoft PASCAL manual
String emulation by David Solly
LarKen DOS I/O features by David Solly and Larry Kenny
Ottawa, Ontario, Canada,
25 March 1990   Revised 4 November 1998

```
CONST
 MaxLen = 32, { Maximum length for the "string" }
 MaxEnt = 10; { Maximum number of entries in
          the telephone directory }
TYPE
 { An array type for holding file names }
 FileNameType = ARRAY[1 9] OF CHAR,
 { A special type to emulate a "string" }
 StringType = RECORD
         CharStr  ARRAY [1 .MaxLen] OF CHAR,
         Len      INTEGER
        END,
 { A base type for each entry in the directory }
 EntryType = RECORD
         Name   StringType,
         Number  StringType,
        END,
VAR
 Directory   ARRAY [1 .MaxEnt] OF EntryType,
 I         INTEGER,
 Ans        CHAR,
 FileName   FileNameType,
PROCEDURE StrRead (VAR EntryData   StringType),
{ A procedure to read each character that is
 entered while keeping track of the number of
 keystrokes as the information is placed into
 the array }
BEGIN
 EntryData.Len := 0,
 { Required in HiSoft PASCAL,
  see the manual }
 IF EOLN THEN READLN,
 WHILE NOT EOLN DO
  BEGIN
   EntryData Len := EntryData Len + 1,
   READ(EntryData CharStr[EntryData.Len])
  END,
READLN, { Required after READ }
END,
PROCEDURE StrWrite(VAR PrintData   StringType),
{ A procedure to write out the information
 contained in each string }
VAR
 Letter  INTEGER,
BEGIN
 FOR Letter := 1 TO PrintData.Len DO
  WRITE(PrintData.CharStr[Letter])
END,
PROCEDURE ReadData,
{ A procedure to read names and numbers
 into the telephone directory }
BEGIN
 PAGE,
 FOR I := 1 TO MaxEnt DO
  BEGIN
   WITH Directory[I] DO
    BEGIN
     WRITE('Enter Name ',I.2,', Please >'),
     StrRead(Name),
     WRITELN,
     WRITE('Enter Number, Please >'),
     StrRead(Number),
    END,
  END,
END,
PROCEDURE PrintData,
{ Reads the information contained in the
 telephon directory }
BEGIN
FOR I := 1 TO MaxEnt DO
 BEGIN
  WITH Directory[I] DO
   BEGIN
   StrWrite(Name),
   WRITE('  '),
   StrWrite(Number),
   WRITELN
   END
 END
END,
PROCEDURE DataStore (Name   FileNameType,
            Start, Bytes   INTEGER),
Purpose
  Writes data to the disk
History
  Concept and research by David Solly
  Machine code by Larry Kenny
BEGIN
 INLINE (
  #F3, #CD, #62, #00, #3E, #0B, #32, #02,
  #20, #DD, #E5, #21, #22, #20, #06, #09,
  #DD, #7E, #06, #FE, #00, #20, #02, #3E,
  #20, #77, #23, #DD, #23, #10, #F1, #DD,
  #E1, #CD, #CC, #00, #DD, #6E, #04, #DD,
  #66, #05, #22, #33, #20, #DD, #6E, #02,
  #DD, #66, #03, #22, #31, #20, #CD, #CF,
  #00, #3A, #64, #00, #FB
     ),
END,
PROCEDURE DataFetch (Name   FileNameType;
                Start, Bytes   INTEGER),
  Purpose
    Reads a file from the disk drive.
  History
    Concept and research by David Solly
    Machine code by Larry Kenny
BEGIN
  INLINE(
    #F3, #CD, #62, #00, #3E, #64, #32, #B0,
    #5C, #3E, #0B, #32, #02, #20, #DD, #E5,
    #21, #22, #20, #06, #09, #DD, #7E, #06,
    #FE, #00, #20, #02, #3E, #20, #77, #23,
    #DD, #23, #10, #F1, #DD, #E1, #CD, #C6,
    #00, #3A, #B0, #5C, #FE, #65, #28, #15,
    #DD, #6E, #04, #DD, #66, #05, #22, #33,
    #20, #DD, #6E, #02, #DD, #66, #03, #22,
    #31, #20, #CD, #C9, #00, #3A, #64, #00,
    #FB
      ),
END,
```

Main Program

```
BEGIN
PAGE,
WRITELN('The object of this program is to demonstrate'),
WRITELN('how type may be developed to emulate the'),
WRITELN('type String which is found in other versions'),
WRITELN('of PASCAL and also to demonstrate how
data'),
WRITELN('stored within records and arrays may be'),
WRITELN('transferred to and from the LARKEN Disk'),
WRITELN('system using the procedures "DataStore()"
and'),
WRITELN('"DataFetch()" '),
WRITELN,
WRITELN,
WRITELN('Hit any key when ready '),
READLN,
READ(Ans),
ReadData,
PAGE,
WRITELN('Now to store the data to disk'),
WRITELN,
WRITE('Enter a name for disk storeage >'),
READLN,
READ(FileName),
DataStore(FileName,ADDR(Directory),SIZE(Directory)),
PAGE,
WRITE('Data Stored.'),
WRITELN,
WRITELN('Now to fetch the data from the disk.'),
WRITELN,
WRITELN('Enter a name for disk fetch >'),
READLN,
READ(FileName);
READLN,
DataFetch(FileName,ADDR(Directory),SIZE(Directory)),4
PAGE,
PrintData,
WRITELN,
WRITELN,
WRITELN('End of Demonstration')
END
```

---

[1] Actually, the version of HiSoft PASCAL that was converted for use on the Timex/Sinclair 2068 could immediately access the ZX Microdrive which was a high-speed - compared to tape! - mass storage device Unfortunately, the ZX Microdrives were relatively hard to come by in North America.

[2] The DataStore() and DataFetch() procedures, like their tape counterparts TIN() and TOUT(), can be used to transfer virtually any section of RAM, including the screen buffer, on or off the disk by supplying the start and length parameters in the locations occupied by ADDR() and SIZE()

[3] Based in part on the HiSoft PASCAL demonstration program Tape

[4] Unlike its tape counterpart TIN(), DataFetch() requires both the start address and the size of the file in bytes

---

SPEED Comparison Between 2068, PASCAL and Compiled BASIC (TIMACHINE)

by Larry Kenny (Edited by David Solly from Mr Kenny's 1989 article)

I have been working on using my Timex/Sinclair 2068 to control a 3-axis drilling/routing machine using stepper motors. To make the machine move in arcs and circles I needed to use the sine and cosine functions in the Timex/Sinclair 2068 ROM. After trying some BASIC and machine language — using the floating point interpreter — routines, I found that the program couldn't run nearly fast enough to keep the machine busy at full speed.

I asked David Solly, who is a long time HiSoft PASCAL user, to write me a test program using its sine/cosine functions so I could test it against Timex/Sinclair 2068 BASIC and compiled BASIC

The test program plots around a circle 100 times

The results:

T/S-2068 BASIC interpreted	**150 seconds**
Compiled BASIC (Timachine)	**126 seconds**
Hi-Soft PASCAL	**18 seconds**

Wow! The PASCAL really flies even when doing floating point math. It has all its own math routines built in so it doesn't do any ROM calls. That also means that the compiled code can be burnt into an EPROM and run on a Z80 based CPU without the Timex/Sinclair ROM resident

The compiled BASIC is only slightly faster that regular BASIC when the floating point routines are used. Even calling the Timex/Sinclair 2068 floating point routines from machine code doesn't make much difference

If you are writing a program that does a lot of calculation such as a spread sheet, 3d graphics, or CAD etc , PASCAL will far out perform BASIC

Timex/Sinclair 2068 BASIC Circle Listing

```
5  REM ! OPEN #    (Timachine only)
10 LET RAD = 50
20 FOR A=0 TO 628 STEP  5
30 PLOT 80 + RAD * SIN A , 80 + RAD * COS A
40 NEXT A
50 PRINT "END OF PROGRAM "
```

HiSoft PASCAL Circle Listing

```
PROGRAM CIRCLE,
PROCEDURE PLOT (ON   BOOLEAN, X, Y
INTEGER),
BEGIN
 IF ON THEN WRITE(CHR(21),CHR(0))
  ELSE WRITE  (CHR(21),CHR(1)),
 INLINE (#FD, #21, #3A,  #5C,
       #DD, #46, 2, #DD, #4E, 4,
       #CD, #E5, #22),
 END,
PROCEDURE CIRC,
CONST RAD = 50,
VAR
  A   REAL,
  ON   BOOLEAN,
BEGIN
  A := 0,
   ON  = TRUE,
    REPEAT
     PLOT (ON, ENTIER(80 + RAD * SIN(A)),
      ENTIER(80 + RAD * COS(A))),
     A  = A + 0.5,
   UNTIL A > 628,
  END,
BEGIN (*MAIN PROGRAM*)
 CIRC,
 WRITELN ('END OF PROGRAM'),
END
```

QL Hacker's Journal

Supporting All QL Programmers #29 October 1998

The QL Hacker's Journal (QHJ) is published by Tim Swenson as a service to the QL Community The QHJ is freely distributable Past issues are available on disk, via e-mail, or via the Anon-FTP server, garbo.uwasa.fi The QHJ is always on the look out for article submissions

QL Hacker's Journal
c/o Tim Swenson
2455 Medallion Dr
Union City, CA 94587-1914
swensont@geocities.com swensont@jack.sns.com
http://www.geocities.com/SiliconValley/Pines/5865/index.html

Editor's Forum

I'd like to thank Per Witte for providing pretty much the core part of this issue I saw the Filename Parser program posted to the QL-users mailing list and thought it would be good material for an article I contacted Per and he was willing to write something up The length of the article was more than I expected, but I'm not complaining.

I'm still pressing forth with the Qlib Source Book. I've been delayed by a broken hand (out of cast and getting better) I'm pushing myself to get something out soon, even if only about 10% of what I would like to see in the Book. I'm looking for information about the history of Qliberator (the various releases) and any bugs in the current release (3.36) If you have some info, please send it to me

My other project is the QL PD Documentation Project (I'm using PD loosely to mean freely available) I'm trying to collect (in one location) a variety of released information about the QL and QDOS Currently I have a number of documents, including parts of the QL User Guide, a couple of Tutorials, and a few articles that I've scanned in from IQLR. Please take a look at my web site to see what I've gathered It is

www.geocities.com/SiliconValley/Pines/5865/

Shelling Out To SuperBASIC

The QL is unique in how QDOS and SuperBASIC are sort of rolled into one Just as we can only have one copy of QDOS running, we can only have one copy of SuperBASIC running (OK, I know this is not true for Minerva)

In a traditional operating system model, there is the OS and the Shell The Shell is a user interface to the operating system In UNIX there are many different shells, Boune (sh), C (csh), Korn (ksh), etc. In MS-DOS the shell was in COMMAND.COM. Even with Win95, there is a MS-DOS Shell still available

In most OS's, there can usually be more than one shell running at one time Application programs can fire off another Shell and run one or more commands The new shell becomes a child process of the calling application

All of this comes about because the shell is nothing more than another user application. On the QL we are limited in that only one copy of SuperBASIC can be run at one time at it must be Job 0

In QDOS, user applications can call other programs An editor could call C68 to compile a program that was just edited and saved But when the command needed to run is a built-in SuperBASIC command (which includes LOADable extensions), there is no way to shell out to SuperBASIC to run the command

I ran into this problem when I wanted to run Qliberator from within MicroEmacs MicroEmacs allows for executing programs from MicroEmacs, but I could not run all the command for QLiberator that I needed. To explain, here are the steps to run QLiberator

1. Load the program into SuperBASIC
2. Call "Liberate" to create a working file.
3. Execute Qlib

Here is a the steps in SuperBASIC terms

```
LOAD FLP1_TEST_BAS
```

```
LIBERATE FLP1_TEST_BAS
EXEC QLIB
```

Since I can't call LOAD or LIBERATE from within MicroEmacs, I thought I could write a SuperBASIC program and then compile it. This may work with LIBERATE, but LOAD is not a command that QLib will compile.

I thought I was stuck until I started reading the HotKey System II manual. It was there that I ran across the two commands, HOT_CMD and HOT_DO

HOT_CMD assigns to an ALT key, a command that will be entered in the SuperBASIC window (#0). It does not have to be an executable program, but can be a SuperBASIC statement or a resident command (like TKII or DIYtoolkit) HOT_CMD "picks" the SuperBASIC interpreter to the top and the command is sent to SuperBASIC to be run.

The HotKey System II was designed to be driven by the user. It is the user typing in a HotKey sequence that puts the System into motion. There in a HotKey command that allows automation of the HotKey System. HOT_DO HOT_DO tells the System to implement a HotKey. HOT_DO('a') is the same as the user hitting the ALT-a keys

Using HOT_CMD and HOT_DO in conjunction, the programmer can perform actions just as if they were "shelling" out to SuperBASIC. In the case stated above, here is how I would use the two commands to automate using Qliberator

```
10 file$ = "flp1_test_bas"
20 ERT HOT_CMD('a','LOAD file$')
30 HOT_DO('a')
40 ERT HOT_CMD('b','LIBERATE file$')
50 HOT_DO('b')
60 EXEC QLIB_OBJ    REMark Just EXEC it
```

I can get away with having LIBERATE in a compiled QLib program, but not LOAD. Here is a way to get around this limitation.

Parameter Passing Techniques in S*BASIC

Per Witte

In QHJ#24 and #25 there were articles no parameter passing techniques (By Tim Swenson and by Peter Tillier, respectively) I won't (too much) re-hash what's already been said (this article was prepared before I was aware of the other two), but look at the matter in a practical way, that may suit some readers.

I'm using SBASIC for this article - the enhanced SuperBASIC interpreter that comes with SMSQ and SMSQ/E. SBASIC behaves somewhat differently to SuperBASIC with respect to variable handling, and has some desirable features, not available in standard SuperBASIC. Where this affects the subject at hand I shall try and point out the differences. However, I am presently not able to test my examples in SuperBASIC, so some incompatibilities (i.e., bugs) may be found. Please always ensure that the techniques described work with your version of S*BASIC before relying on them in any way

<<< Value or Reference? >>>

There are two ways of passing parameters to functions and procedures in S*BASIC: by value, which is perhaps the "intuitive" method, and by reference, which will be the main focus of this article

Passing parameters by value is (what we may THINK) we normally do. RUNning the program fragment below

```
10 test1 1,2,3
99
100 defproc test1(a,b,c)
110 print a,b,c
120 enddef
130
```

would print "1 2 3" on your screen (with any luck!) And of course

```
10 x=1 y=2 z=3        rem Assign values to some variables
20 test1 x,y,z.       rem and use these instead
```

does the same. But a small modification of test, test2, shows what's really going on.

```
99
100 defproc test2(a,b,c)
110 print a,b,c
120 a=a+a:b=b+b c=c+c:rem Double all parameter
variables!
130 enddef
140
```

The new harness

```
10 x=1 y=2 z=3
20 test2 x,y,z
30 print x,y,z
 1   2   3 <- prints out x, y, & z, as expected
 2   4   6 <- but what's going on here? We set x,y,z to be
1,2,3!
```

By altering the values of the parameter variables a, b, & c, we cause a change to the calling variables x, y, & z too. This is a call by reference, we don't pass to the procedure merely the values the variables contain, instead we refer to the original variables - a, b & c ARE x, y, z, only by a different name. As you will appreciate passing parameters by reference is not always desirable. In fact, unless you specifically want to do so, it could be a real pain. You can see how a procedure might easily (and unintended by you) alter its parameters, and thereby variables external to itself. To avoid this you can apply the rule never to alter a procedure's formal parameters within the procedure, or you must, pass your variables by value only. But how to do that?

If you typed test2 1,2,3, what do you think happens to a, b, c? Well, their values are simply thrown away when the routine returns. By extension, the same holds good for test2 p+1,q+1,r+1, having previously set p, q, r to some value. Anything other than a variable is considered an expression in this context, and can therefore not receive a return value

Thus

```
10 x=1 y=2 z=3
20 test2 (x),y+0,z^1
30 print x,y,z
 1   2   3 <- prints out x, y, & z, as expected
 1   2   3 <- prints out x, y, & z, as expected(?)
```

Good programming practice would avoid altering the parameter variables - copy their values into LOCal variables instead! In my opinion, test2 (x),(y),(z) gives the clearest indication of intent, besides being (marginally) faster than say, x+0,y+0,z+0, and so is a good convention to adopt for call by value

<<< Coercion >>>

There are other "oddities" about the way parameter passing works For example

```
10 x$='a' y=3 z%=3
20 test3 x$,y,z%
30 print x$,y,z%
99
100 defproc test3(a,b,c)
110 print a,b,c
120 a = a & a  b = b / 2  c = c / 2
130 enddef
140
```

RUNning this program produces

```
a   3   3    <- x$  y  z%
aa  1 5  2
```

Not what you'd think, looking at the formal parameters a, b, c! However, this can be very useful, as will be shown later Things to watch out for though are You may assume that the formal parameter decides the type, when it actually is the calling parameter that does so! An example might be

```
10 x=1 y=4
20 fast_test x,y,10
99
100 defproc fast_test(a%,b%,c%)
110 rep loop
120  a%=a%+1 b%=b%+b% c%=c% div 3
130  if c%=0 exit loop
140 endrep loop
150 enddef
160
```

You're expending all this effort optimizing fast_test; changing out floating point variables with integers, and the like You need not have bothered! This is what it's actually doing

```
120 a=a+1 b=b+b.c=c div 3
```

In fact everything runs in (relatively) slow floating point! The correct moves are

```
10 x%=1 y%=4.z%=10
20 fast_test x%,y%,z%
```

will pass integers to fast_test, and/or

```
100 defproc fast_test(a%,b%,c%)
110 loc r%,s%,t%
120 r%=a% s%=b% t%=c%            etc
```

What you then use in the formal parameter list is irrelevant (except as a reminder as to what the correct type should be!) Also copying the parameters into LOCal variables will coerce the parameters back to the desired type In tk2 there are commands to test the parameters that are passed to a procedure PARTYP tells you the actual parameter type (nul (never nul in SBASIC), string, float, or integer) and PARUSE whether the parameter is an array or not.

< Returning Values through the Parameter List >

A "by-product" of the ability to pass parameters by reference, is that we can actually return more than one value to the calling program. Both functions and procedures can be used for this I find the

function_error = Function(update-able parameter list)

construct particularly useful, as I hope to show Below follows a commented listing on a filename parsing utility for S*BASIC that hopefully illustrates the technique

```
1 PRINT,'(Simplyfied) Filename Parser'
2 REMark    ©PWitte 1998
3 PRINT,!!!!!'PD - No Warranties'!!!!!
4
5 dfnm$='win1_bas_util_fnm_ParseFnm_bas'
6 er=ParseFnm(dfnm$,ddev$,ddir$,dnm$,dext$)
7 PRINT\\'Fnm '!dfnm$\\'Dev '!ddev$\'Dir '!ddir$\
8 PRINT 'Nme '!dnm$\'xt '!dext$\'Err '!er
9 STOP
10
```

Above The first part of the program gives some information, and shows and example of usage.

```
32724 DEFine FuNction ParseFnm(f$,v$,d$,n$,e$)
```

This part of the program is the object of the enterprise, the file name parser itself Due to the nature of the QL's file system (FS), it is impossible to determine how much of the latter part of the name is filename and how much is directory name merely by inspecting the filespec You have to actually open the file (or its directory) to find out The function does this, and then breaks up the filespec according to a mixture of known facts and assumptions (i.e , it's not foolproof!) It puts the different sections into the supplied variables, and returns nk

The function is defined as a floating point function, even though its main task is to manipulate, and you might say, return text. In this, simplified, version any values pre-supplied in v$ e$ are overwritten. The only parameter you should supply is the f$ (for Full Filespec) This is (more or less) expected to be in the form of

```
key <> = name, | = or; [] = optional (0 1),
 {} = repeated (0_)
  <sep> = directory separator, '_'
   <exsep>= extension separator, '_ | ' (SMSQ/E)
   <filespec> =
  <device name><drive number (1 8)><sep>
  {<directory section><sep>}
 [<filename>[<exsep>[<extension>]]]
32725 LOCal c,t,p%,t%
32726 REMark Split filename into components
32727 c=FOP_DIR(f$) IF c<0 RETurn c
```

FOP_DIR is a function (introduced in Toolkit I/II (tk2), by Tony Tebby, and included with many disk interfaces, and in SMSQ*) It tries to make the best of the information supplied, and will open the first directory that matches the first part of the filespec So if you have a directory called 'win1_asm_' (but none called 'win1_asm_prg_ _') and you did a ERT FOP_DIR(win1_asm_prg_temp) the function would open directory 'win1_asm_' taking the rest of the filespec to be a filename!

```
32728 d$=FNAME$(#c) CLOSE#c
```

FNAME$ (also a function from tk2) returns the name of any file, also directory files So, continuing our specific example above, d$ (for Directory) would now contain 'asm' - Note the device name is not returned

```
32729 IF LEN(d$) THEN
```

FNAME$ did return (at least the first) part of the directory name, e.g. 'asm'

```
32730  p%=d$ INSTR f$ IF p%=0 RETurn -7
```

If the filename returned by FNAME$ is, after all, not in the filespec return the error Not Found

(This would be the case if you tried to

  DATA_USE 'win1_asm'

```
   ERT FOP_DIR(#3,'abc_test')
   FNAMES$(#3) would then return 'asm')
32731 d$=d$&'_'
```

If d$ _is_ a substring of filespec, append the filename separator (as the last one is not stored in the directory file)

```
32732 ELSE
```

At this point d$ is " This could mean that <root> had been specified, that no matching directory was found (e g had we specified 'win1_prog_temp_' and there was no 'win1_prog_'), or that something was wrong

```
32733 p%=('_' INSTR f$)+1
```

Do a primitive test on the filespec to see if it contains a devicename, e g. 'win1_'

```
32734 END IF
32735 v$=REMV$(p%,LEN(f$),f$)
```

v$ stands for deVicename v$ gets set to the first part of filespec, up to the first underscore

```
32736 IF LEN(v$)<3 RETurn -12
```

Better would have been

```
   32735 IF p%<3 OR p%>5 RETurn -12
```

This version of the filename parser doesn't support networked drives, so

```
   32735 IF p%<>5 RETurn -12
```

would be correct here Then

```
   32736 v$=REMV$(p%,LEN(f$),f$)
```

Tests whether the first part of the filespec is a possible devicename (Devicenames can only legally be 3, 4, or 5 characters long, as in 'S7_', 'n63_', 'ram2_' Anything other is an error Further tests should be done here to determine whether v$ is 'legal' device name, but there is no easy way of knowing for sure. (Try OPEN_NEW#3, 'flp7_test':PRINT FNAMES$(#3) and see what you get (presuming you don't have an flp7_ ,)

```
32737 IF p%+LEN(d$)=LEN(f$) THEN
32738 n$='' e$=''
```

We allow filespec to be incomplete from devicename down In the case above filespec == device name & directory name, i.e. there is no filename and no extension

```
32739 ELSE
32740 n$=REMV$(1,p%+LEN(d$)-1,f$)
```

There is a name (and possibly an extension) Let n$ (for fileName) hold it for now

```
32741 p%=0
32742 FOR i%=LEN(n$) TO 1 STEP -1
32743  IF n$(i%) INSTR '_ ' p%=i% EXIT i%
32744 END FOR i%
```

Here we just check filename from the end of the string for the first '' or '_' it encounters This, it decides, will be the extension

```
32745 IF p%=0 THEN
32746  e$=''
```

No extension found.

```
32747 ELSE
32748  e$=REMV$(0,p%-1,n$)
32749  n$=REMV$(p%,99,n$)
```

Slice filename into name part and extension part.

```
32750 END IF
32751 END IF
32752 RETurn 0
```

Return OK

```
32753 END DEFine
32754
```

The final part of the program is a help-function REMOVES (shortened to REMV$ in its S*BASIC incarnation) all it does is to simplify string slicing by encapsulating all the error trapping. It won't be looked at here

```
32755 DEFine FuNction REMV$(fr%,to%,str$)
32756 IF fr% < 2 THEN
32757  IF to% >= LEN(str$) RETurn ''
32758  RETurn str$(to% + 1 TO LEN(str$))
32759 END IF
32760 IF to% >= LEN(str$) THEN
32761  RETurn str$(1 TO fr% - 1)
32762 ELSE
32763  RET str$(1 TO fr% - 1) & str$(to% + 1 TO
LEN(str$))
32764 END IF
32765 END DEFine
32766
```

The weird numbering scheme is to enable the function to be easily MERGEd into a larger program that needs it, linenumbers <100 can be removed after testing

<<< Arrays as Parameters >>>

Also arrays are passed by reference, when you supply an array parameter you are allowing the procedure to access your actual array The same rules described above regarding type coercion also apply to arrays

Unfortunately, S*BASIC provides only limited "mass" operations (for lack of a better term) on arrays though you can pretty much slice them up any which way you choose. This comes in handy if you want to write your own mass-ops in S*BASIC or machine code You can't do a = b with arrays in S*BASIC but you can write your own EQU a TO b, which does exactly the same (see commented listing of EQU below)

```
1 DIM a$(2,2,2,2,6),b$(2,2,2,2,8)
2 DIM a(2,2,2,2),b(2,2,2,2)
3 FOR i%=0  TO 2:FOR  j%=0 TO  2 FOR k%=0  TO
2 FOR  l%=0 TO
2 a$(i%,j%,k%,l%)='L'&i%&j%&k%&l%
4 count%=0
5 FOR i%=0  TO 2:FOR  j%=0 TO  2 FOR k%=0  TO
2 FOR  l%=0 TO
2 a(i%,j%,k%,l%)=count% count%=count%+1
6
```

Above Initialize a few test arrays (use plenty of dimensions) Note you'll have to modify all integer FOR-loops to make this program run under plain QL SuperBASIC!

```
10 CLS PRINT a$,\
12 er=EQU(b$,a$)
14 CLS#0 CLS#2 PRINT#2,b$,\:PRINT#0,er
16 BEEP 2000,20 PAUSE
18 CLS PRINT !a!\
20 er=EQU(b TO a)
22 CLS#2 PRINT#2!b!\ PRINT#0,er\
24 BEEP 2000,20
26
```

Test harness Edit to taste

```
100 REMark EQU SBASIC function to
101 REMark EQUate two arrays of the
```

```
102 REMark same dimensions and type
103 REMark Requires tk2 or equivalent
104
105 REMark  ©PWitte, August 1998
106 REMark For "educational" purposes only
107 REMark Use at own risk. No warranties!
108
```

Can't say you haven't been warned!

```
1000 DEFine FuNction EQU(a,b)
```

The idea is to equate array a with array b in a reasonably rational manner, while demonstrating some of the niceties of parameter passing techniques using arrays, at the same time

The first thing to note is that EQU will handle any type of array i e , integer, sting, & float - although the parameter list only shows float! Also, any number of dimensions are handled The only provision, in this implementation, is that they are of the same type and have the same number and size of dimensions (except string, in the last dimension)

```
1010 LOCal er
```

This nice little feature of "inheritance" is not documented anywhere, as far as I know

A LOCal variable defined in one procedure will remain local in any procedure called by that procedure, unless the variable has been "re-defined" by a subsequent use of LOCal

Here the local variable, er (error flag) is set in EQU, the calling function, and modified in EQN/EQS Yet a variable er, defined in the initial code, outside any procedure body, would retain its original value. The only danger lies in that if the same sub-routines were to be reused by another procedure, you may forget to declare it as LOCal in the calling procedure and end up mysteriously modifying a GLOBal variable instead! It certainly saves the repeated overhead of stacking a local variable for each recursive call to EQN/EQS here, as would be the case if we defined er EQN/EQS

```
1020 IF PARTYP(a)<>PARTYP(b):RETurn -15
1030 IF PARUSE(a)<>PARUSE(b):RETurn -17
```

Checks whether parameters are arrays, and of the same type The error checking here is ent foolproof

```
1040 er=0
1050 IF PARTYP(a)=1 THEN
1060  RETure EQS(a,b)
1070 ELSE
1080  RETurn EQN(a,b)
1090 END IF
```

String arrays must be handled slightly differently to numeric ones, in that the last dimension is the string itself It might be possible to find a universal algorithm, to handle numbers and strings, but it makes sense to use the built-in mass assignment features and copy whole strings at once, rather than byte by byte So the string and numeric sides have been implemented as separate functions. Another advantage is that this offers the opportunity to optimize them (how ever slightly) for their different uses.

```
1100 END DEFine
1110
2000 DEFine FuNction EQN(a,b)
2010 LOCal i%
```

Another reason for separating out these sub-routines as functions, is that we can take advantage of the interpreter's excellent array slicing abilities, as in line 2070

```
2020 IF DIMN(a)<>DIMN(b) RETurn -4
```

Every dimension has to match in size. This test will be performed before any processing takes place The alternative would be to use a special sub-routine

```
2030 IF DIMN(a(0))=0 THEN
```

Look-ahead If the next dimension is past the last, then this is the dimension we can work with

```
2040  FOR i%=0 TO DIMN(a) a(i%)=b(i%)
```

Copy this dimension from b to a, element by element. This also terminates recursion at this level

```
2050 ELSE
2060  FOR i%=0 TO DIMN(a)
2070   er=EQN(a(i%),b(i%)) IF er<0 EXIT i%
2080  END FOR i%
```

More than anything, a function like EQU wants speed, so loops have been specialized, reducing the overheads of test & branch. The use of recursion is almost necessary, thanks to the parser's array-slicing abilities!

```
2090 END IF
2100 RETurn er
```

The error-checking stuff is not strictly necessary in a programming toolkit - error-checking is performed at the program level - but it's easier to delete it than add it when needed (e g during program development)

```
2110 END DEFine
2120
3000 DEFine FuNction EQS(a,b)
```

Pretty much the same as for EQN above, but optimized for string operations

```
3010 LOCal i%
```

Note that the same technique cannot be used for i% as er i%'s value will be different at different levels of recursion i e , i% has to be saved between levels

```
3020 IF DIMN(a)<>DIMN(b) RETurn -4
3030 IF DIMN(a(0,0))=0 THEN
```

This arrangement was actually a bug, as no comparison is made on the last dimension However, as the interpreter doesn't complain and simply ignores any supernumerary characters, I thought I'd leave it there as a feature

Ie, DIM a$(5,10),b$(5,8) er=EQU(b$,a$)

works, though any strings longer than eight characters will be truncated

```
3030 IF DIMN(a(0,0))=0 THEN
```

Remember a() refers to an array of type string! Operations can be performed at a higher structural level, so we terminate recursion one level up

```
3040  FOR i%=0 TO DIMN(a) a(i%)=b(i%)
```

Copy one whole string at a time

```
3050 ELSE
3060  FOR i%=0 TO DIMN(a)
3070   er=EQS(a(i%),b(i%)) IF er<0 EXIT i%
3080  END FOR i%
3090 END IF
3100 RETurn er
3110 END DEFine
3120
```

Genuine bug/incompatibility reports, suggestions and comments welcome Send to pjwitte@knoware nl

Unclassified Ads

Place your ads here, it is FREE!

Mail to A KAHALE 3343 S FLAT ROCK CT SIERRA VISTA AZ 85650-6874

Please inform and/or update the Editor of any changes in your ad/s

SPECTRUM for your 2068

If you are a LarKen LK-DOS owner and would like to run SPECTRUM programs on your system, we will supply a V2 EPROM, socket and 74HCT32 for $12 which includes shipping and handling. The installation instructions are in your LarKen manual. We shall not be responsible for your install job AERCO owners need only the EPROM for $10 forwarded to LarKen.

Bob Swoger Address on page 2

747 Flight Simulator

So you like to fly, the 747 Flight Simulator for SPECTRUM by Derek Ashton of DACC Requires a SPECTRUM equipped 2068 Supplied on LarKen SSDD or DSDD LarKen disk for $10 which goes to Derek now working at Motorola with Bob

Bob Swoger Address on page 2

A Strategic Generic War Game for the TS-2068

CONQUEST

- Available on tape, or disk, AERCO, Oliger Game and map SAVEs in BASIC allows conversion to your system
- Completely in fast machine code Games can be SAVEd and CONTINUEd. Price $19 95 + $2 50 S&H.

Order from -
Lloyd Oreger
2461 S 79th St
West Allis WI 53219

or -
SMUG
Box 101
Butler WI 53007

The John Oliger Co.

11601 Widbey Dr.
Cumberland IN 46229

The John Oliger Floppy Disk System
FOR THE TS-2068

Disk Works
EXPANSION BOARD
2068 User Cartridge
DISK BOARDS "A" & "B"
2068 Parallel Printer Port
2068 EPROM Programmer
2068/SPECTRUM Joystick Port
DFh Mapped Universal I/O Port board
User Manual only $5.00 (Read before you buy)

Service For America's
Favorite Home Computers and Their Accessories

SINCLAIR

TIMEX ADAM ATARI IBM OSBORNE
TI COMMODORE TRS-80
BUY SELL TRADE UPGRADE

Repair Charge Examples

TS-1000, ZX-81, 1016 RAMPack, Memotech, ZEBRA Talker, MIRACLE Centronics, RAM Centronics
$5 00 each + parts & shipping

TS-2020, 2040, PC-8300, ZX-80, TI-99, Z-SIO, Byte-Back, AERCO 2068 Centronics, BASICare, LarKen RAMDisk
$10 00 each + parts & shipping.

TS-2068, Spectrum, A&J MicrD, Miracle 512K, LarKen 1000 & 2068 FDI, Kempston FDI, Cumana FDI, CST FDI
$15 00 each + parts & shipping. July 1, 1996

Reasonable flat rate plus parts and shipping.
Write or call for prices , SASE appreciated

COMPUTER CLASSICS

RT 1, Box 117
Cabool MO 65689
Phone 417 469-4571 417 467-4571

ZX-TEXT - Word Processor
ZX-CALC - Spread Sheet
Business Software
Cycle Accounting Financial Report Generator
ZX-CALENDAR - Time Management
ZX-81 TS-1000 TS-1500 TS-2068
Albert F. Rodriguez

A.F.R. Software®

1605 Pennsylvania Ave 204
Miami Beach FL 33139
305 531-6464

PLATYPUS
SOFTWARE

QLAMBer	$20
QLuMSi	$20
SeekQL	$10
Upgrades	$5

Al Feng

914 Rio Vista Cir SW
Albuquerque NM 87105
(505) 843-8414

WOOD & WIND

Bill Cable

ARCHIVE Based QL Software

QLerk - A complete financial program for the QL

QLerk software (v3 21) with tutorial	$29
QLerk manual	$29
QLerk software & manual	$50

DBEasy - A menu based database system

DBEasy software (v1 6)	$24
DBEasy upgrade from V1 5	$7

DBProgs - A toolkit of ARCHIVE procedures

DBProgs software (v1 8)	$18
DBProgs upgrade from V1.7	$7

DBTutor - A general purpose learning program

DBTutor software(v1 5)	$12

PC DBEasy - Just like QL DBEasy but, you must have PC ARCHIVE to use it.

PC DBEasy software (v1 3)	$12

Wood & Wind Computing
RR3 BOX 92
Cornish NH 03745 USA
Phone (603) 675-2218
Email bcable@triton coat.com

QBox USA

810 254-9878
14 hours a day
300 to 28,800 bps

Supporting all Sinclair and Timex users Fidonet echomail areas for Sinclair computers Lots of new files for you to download such asTS-2068 emulator for those who use a PC give us a call and let us know what you want to see

Message area and file area
QL International, Quanta, QL Hacker's Journal, Spectrum/2068, ZX-81/TS-1000, Z88, NetMail, emulators, pointer, FDFormat for QXL/QDOS, etc.

Sysop John J Impellizzeri
Co-Sysop Don Walterman
Utica, Michigan, USA

Domino Cubes

Z88

Hardware & Software
352 7th Ave 15th Flr
New York, NY 10001
Phone 212 631-7563
Fax 212 947-5069 Voice mail pager 917 490-8407
Domino cubes@excelsior net

Make Devid an Offer
ZX-81/TS-1000 TS-2068
Hardware Kits
Real Time Clock I/O Controller RS-232
Centronics I/F 16K & 64K RAM 300 BAUD
Modem A-D Converter(assembled)

BYTE-BACK INC
536 Long Ter
Leesvilla SC 29070

LISTing Newsletter

The Long Island Sinclair/Timex Users Group
Robert Melloy, Treasurer
412 Pacific St.
Massapeque Park, NY 11762

Robert Gilder

NESQLUG NEWS

New England Sinclair QL Users Group
16 Highland Ave
Saugus MA 01906
617 233-3671

QL Hacker's Journal

Supporting All QL Programmers

Timothy Swenson, *Editor*
2455 Medallion Dr
Union City, CA 94587
swensontc@geocities com
http //www geocities com/SiliconValley/Pines/5865/

CATS Newsletter

The Capital Area T/S Users Group
Barry Washington
7044 Cindy Ln
Annandele VA 22003
301 589-7407
BBS 301 588-0579
Internet mf0002@epfl2 epflbalto org

Nite-Times News

Newsletter

Chicago Area Timex Users Group
Robert Swoger
613 Parkside Cir

Streamwood IL 60107-1647
630 837-7957
CENG-108@email mot.com

The Ramtop

Newsletter

The Greater Cleveland T-S User Group

Thomas Simon Editor
615 School Ave
Cuyahoga Falls OH 44221
E-Mail CIS 73177,333

Jon Kaczor Production
4568 Williamson Ave
Brooklyn OH 44144
75363 1127@compuserve com

ZX-TEAM MAGAZIN

Pater Liebert-Adelt
LUETZOW STR 3
D-38102 BRAUNSCHWEIG
GERMANY
Email p liebert@t-online de
http //home t-online de/home/p liebert/zx-team.htm
Amateur Radio DK4BF@DB0FC #NDS DEU EU

FOR SALE: Conner QIC-80 tape backup (kit) with four new (sealed) pre-formatted tapes very little use $75 00 (includes shipping)

Al Feng
914 Rio Vista Cir SW
Albuquerque, NM 87105
(505) 843-8414

WANTED: Cartridges! For the TS2068 VU-Calc, VU-File, Budgeter, Pinball, Androids, Penetrator, Zebra OS-64, LarKen LKDOS, Oliger JLODOS, Spectrum ROM, Backgammon, Blind Alley, Chess, Hungry Horace, Horace & the Spiders, Horace Goes Skiing, Zeus Assembler, Zeus Hi-Monitor, Zeus Lo-Monitor; also EPROMs for the EPROM module. For TS1000/1500 TS1510 cartridge module; cartridges Chess Supermath, States & Capitals, Flight Simulator; Rompak Eprom-Holder Cartridge and any EPROMs

Russ Perry Jr
2175 S Tonna Dr #105
Arlington Hts, IL 60005
847-952-9729
slapdash@enteract com

LogiCall 6.0

The Final Version

Newly updated, easy-to-read, LarKen LKDOS ver. 3 Manual

Includes missing information related to the JLO and the Tasman 'B' CPI, mouse and re-numbering program

Updated version 6.0 LogiCall Manual

with sections on utilities and BASIC drivers for modified commercial software and switching system ROMs without powering down.

Available for $15 from

FWD Computing

Items for the T\S Computers

Timeworks Programming kit #1 For T/S 1000 & ZX81 $4 95
Mindware Gulp Game Timex 1000 & Sinclair ZX81 $4 95
Timex Horace & The Spiders for the 2068 $5 95
Timex Sinclair 1000 software on tape
Chess (16K RAM) qty 5 price $2 95 ea
The Challenger I qty 17 price $2 95 ea
Mindware MW100 plain paper printer for the TS1000 or ZX81 computer made in the US $45 00

All items are new Please add $3 95 shipping to all orders.

MC, VISA, American Express phone 717-748-1747

Keith Electronics
224 North Grove St
Lock Haven, PA. 17745

The ZX Spectrum 48/128 Emulator

for IBM & Compatables: Z80 Version 2.01

Turn your PC into a real ZX Spectrum 48/128!

⇒- Full Spectrum emulation, border flash, beeper, Interface 1, Microdrive in cartridge file, RS232 input and output redirection to file, COM or LPT, joystick support, 128K sound through Soundblaster or internal speaker, built-in monitor,

⇒- Able to load ANY, even protected or speed-saved program from tape, to save to tape, to redirect tape loads and saves to disk for easy file access,

⇒- 2500 line English documentation

⇒- Z80 processor emulation including R register, inofficial instructions, inofficial flags,

⇒- Runs okay under DOS, Windows and DesqView,

⇒- Full source code of emulator and utilities included!

Runs on any 640K PC, too slow for practical use on PC/XT's but fast enough on AT's , runs at about 100% on 16MHz AT's (can be slowed down on faster machines), uses VGA/EGA/CGA or Hercules

This program costs US $20 You will receive a 3 5" DD disk (5 25" disks on request), and you'll be kept informed about updates Please send bank notes (bills), name and address to

Gerton Lunter
PO Box 2535
NL-9704 CM Groningen
Netherland

If you send a cheque, please add US $15 extra and allow 4 weeks for delivery

Jochen Merz Software

The RomDisk! Fully functional!

See previous issue of QL Today Extremely small board for the QL's ROM-Port, works like a permanent RAM disk, even if the power is taken away, contents are not lost!

RomDisk 2 MB	DM 129
RomDisk 4 MB	DM 199
RomDisk 8MB	DM 299
Aurora Adapter for RomDisk	DM 9 90

Special Offer

The color drivers are coming In order to be able to upgrade to

the color drivers, you need to have SMSQ/E The *normal* SMSQ which is shipped with QXL card will not be able to handle more colors. To benefit from the colors in the future, and benefit now from the extra features of SMSQ/E, here is a special offer

SMSQ/E for the QXL

Only DM 169.

As Aurora owners will be able to use more colors when the color drivers are available, another offer for SMSQ/E for the Aurora plus GoldCard/Super/GoldCard

SMSQ/E for the Super GoldCard

QL Games & Upgrades
QL Applications
ProWesS + Applications
Jochen Merz Software
Im stillen Winkel 12
47169 Duisburg, Germany
☎ 0203-502011
Fax 0203-502012
Credit Cards accepted
http //www j-m-s com/smsq/
e-mail smsq@j-m-s com

QL Today

Who is doing it?

QL Today is being published by Jochen Merz Software Jochen Merz has been supplying software for the QL for several years and has built up a good reputation for quality and fair trading The representative in Britain is Miracle Systems Ltd who take subscriptions and do the distribution. The articles in the magazine are written by a number of prominent QLers and the editor is Dilwyn Jones

Subscriptions

Germany (+German add-on)	DM 70	
England	DM 60	£25
Rest of the world	DM 70	£30

Back-issues are available for DM 12 (incl. postage)
Checks should be made payable Miracle Systems Ltd

English Office

Miracle Systems Ltd
20 Mow Barton
Yates, Bristol
United Kingdom BS17 5NF
Tel +44 1454 883602 Fax. +44 1454 883602

Editor

Dilwyn Jones
41 Bro Emrys
Tal-Y-Bont, Bangor, Gwynedd
United Kingdom LL57 3YT
Tel +44 1248 354023 Fax. +44 1248 354023

ZX-81 Kit

$30 Plus $10
for shipping and handling
TS-2040 Printers 16K RAM
We Do Not Ship Outside The US & Canada
Checks, Money Orders and Visa or Mastercard
Call 212-675-8414 FAX 212-675-8980
Zebra Systems, Inc
122 W26th St Suite 904
New York, NY 10001
Shipping is by UPS ground.

Basics of Timex Sinclair 1500/1000 BASIC
A copy of this book is shipped free with each ZX-81 kit
Allen Wolach, Separately priced $12 95

BASIC Basics for the Timex/Sinclair 1500/1000
A copy of this book is shipped free with each ZX-81 kit
Michael Barnett//Simon Barnett, Separately priced $12 95

The Ins and Outs of the Timex TS-1000 & ZX-81
Don Thomasson, $12 95

Computer Interfacing Technique in Science TS-1500/1000
Paul Field & John Davies, $12 95

ZX-81 BASIC Programming (in Spanish language)
Steve Vickers (Traducido y adaptado) A copy of this book is shipped free for asking if you just pay for additional shipping cost Separately priced $10

Alec Carswell

MOTIVATION

16 Montgomery Ave
Beith Ayrshire KA15 1EL
United Kingdom

Sinclair Resources

Jack Dohany (Developer - 2068)
627 Vera Ave
Redwood City CA 94061

John McMicheel (Developer - Graphics)
1710 Palmer Dr
Laramie WY 82070

Bill Russell (QL)
Russel Electronics
RR 1 Box 539
Center Hall PA 16828

Keith Watson
AERCO & Z80 Emulator
41634 Amberly Dr
Mt Clemens, MI 48038

Rod Gowen (RMG)
14784 S Quail Grove Cir
Oregon City OR 97045-8843

Send them a LSASE and ask for information about their current products and/or services